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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/075,150      | 02/14/2002  | Harri Pekonen        | 04770.00040         | 6898             |

22907 7590 02/23/2004

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EXAMINER

PHILPOTT, JUSTIN M

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2665

DATE MAILED: 02/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/075,150

Applicant(s)

PEKONEN, HARRI

Examiner

Justin M Philpott

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_ ✓

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 10, 2003 has been entered.

### ***Response to Arguments***

2. Applicant's arguments filed December 10, 2003 have been fully considered but they are not persuasive.

First, applicant argues (page 11 to continued paragraph on page 13) that neither Mansfield nor Salkintzis alone or in combination teach the limitations recited in applicant's claim 1. Specifically, applicant argues that, contrary to applicant's claim 1, the teachings of Mansfield and Salkintzis are directed towards paging messaging occurring prior to data message transmission. Applicant has compared the "buffered content" recited in claim 1 with such data messaging, and applicant argues that "buffered content" is distinct from information included in the paging messaging of Mansfield in view of Salkintzis. However, as discussed in the previous office action and repeated herein, Mansfield clearly teaches "content" is provided within the packets (e.g., see FIG. 10A, comprising data including 1016 and 1017 such as Bearer Data or Signaling Data), wherein the packets further comprise headers (e.g., 1015) having a time-slice

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parameter (e.g., Next Slot parameter 1010). Further, as also discussed in the previous office action, while Mansfield may not specifically disclose content is buffered, Salkintzis clearly teaches buffering content (e.g., see page 1196, col. 1, lines 4-5). Further, if applicant has intended to argue that Mansfield and Salkintzis fail to teach that paging messaging comprises a payload with message data, such a limitation is not recited in claim 1. That is, in response to an argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., packets with time-slice information further having a payload with message data) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Thus, applicant's arguments are not persuasive.

Second, applicant argues (page 13, first paragraph) that Mansfield in view of Salkintzis fails to teach the limitations recited in applicant's claim 2. Specifically, applicant argues that since Mansfield teaches an embodiment wherein time-slice information specifies a number of transmission intervals, Mansfield fails to teach the limitations of claim 2. However, as discussed in the previous office action and repeated herein, Mansfield further teaches the time-slice information specifies an amount of time that elapses between transmissions of the current packet and transmission of a first transmission packet of the subsequent burst of packets (e.g., see col. 10, lines 24-36). Specifically, Mansfield discloses that time-slice information (e.g., via next page pointer) is used to determine *the actual amount of time that is to elapse* (lines 31-32) wherein the actual time value is loaded into a timer. While Mansfield discloses that a preferable embodiment comprises calculation means located at the mobile end system for determining the

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actual amount of time that is to elapse, it is generally considered to be within the ordinary skill in the art to shift the location of parts absent a showing of unexpected results. Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to shift the location of the actual time calculation means from the mobile end system to the base station, since it is generally considered to be within the ordinary skill in the art to shift the location of parts absent a showing of unexpected results. The contention of obvious choice in design can be overcome if Applicant establishes unexpected results. In re Japikse, 86 USPQ 70 (CCPA 1950). Thus, applicant's argument is not persuasive.

Third, applicant argues (page 13, second paragraph) that Mansfield in view of Salkintzis fails to teach the limitations recited in applicant's claim 9. Specifically, applicant argues since Mansfield discloses an embodiment (e.g., FIG. 6) wherein the next page pointer is in a payload field, Mansfield fails to teach the limitations of claim 9. However, as discussed in the previous office action, Mansfield teaches an additional embodiment (e.g., FIG. 10A) wherein the time slice-information (e.g., Next Slot parameter 1010) is clearly provided within a header (e.g., BS Header 1015) of a packet (e.g., 1001), and not within the payload. Thus, applicant's argument is not persuasive.

### ***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,477,382 to Mansfield et al. in view of the article by Salkintzis et al. entitled, "An In-Band

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Power-Saving Protocol for Mobile Data Networks” (IEEE, September 1998) previously cited by Applicant.

Regarding claims 1, 14, 24, 30, 38 and 43, Mansfield teaches a digital broadcasting communications system (FIGS. 1-3) that transmits and receives bursts of packets which include time-slice information (e.g., header 1015 comprising next page pointer 1010, e.g. see col. 3, line 36 – col. 4, line 50 and FIG. 10A). Mansfield teaches at a transmitter system (network 302, see FIG. 3) encapsulating information received from an information service provider (packet data services PDS service provider 102, 103) to form a packet header (1015) that contains time-slice information including a time-slice parameter (e.g., slot pointer field 1010; e.g., see col. 19, lines 51-67) specifying a relationship between a current packet of a current burst of packets comprising a first portion of content (e.g., 1016-1018) and a subsequent burst of packets comprising a second portion of content (e.g., 1016-1018 transmitted at a later time), wherein encapsulation is performed by the collective structure of systems 355, 380 and 361-365 (see FIG. 3) which provide functions of route calculation, fragmentation, re-assembly, and congestion mitigation functions (e.g., see col. 7, lines 8-19). Mansfield further teaches at a receiving system (e.g., MES 305) receiving and decoding the time-slice information thereby extracting information that specifies a relationship between the current packet of a current burst of packets and the subsequent burst of packets (e.g., see col. 10, lines 24-36).

However, Mansfield may not specifically disclose a buffer and may not specifically disclose bursts of packets include buffered content.

Salkintzis teaches an improved power-saving method for mobile data networks. Specifically, Salkintzis teaches temporarily buffering packets in a base station (e.g., see page

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1196, col. 1, lines 4-5), and further teaches bursts of packets include buffered content and page information (e.g., see Fig. 3) wherein a downlink channel (e.g., see page 1196, col. 2, lines 1-5) comprises packets that include buffered content (e.g., data) and page information (e.g., pages). The teachings of Salkintzis provide improved power-saving characteristics (e.g., see page 1204, col. 1, lines 1-2) for mobile data networks. Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the teachings of Salkintzis to the system of Mansfield in order to provide still improved power-saving for mobile data networks.

Furthermore, as discussed above, Mansfield teaches page information (e.g., within header 1015 in FIG. 10A) comprises time-slice information (e.g., slot pointer field 1010). Thus, the system of Salkintzis in view of Mansfield as discussed above teaches bursts of packets include buffered content and time-slice information.

Regarding claims 2, 7, 20, 25, 31, 39, 44 and 48, Mansfield further teaches the time-slice information specifies an amount of time that elapses between transmissions of the current packet and transmission of a first transmission packet of the subsequent burst of packets (e.g., see col. 10, lines 24-36). Specifically, Mansfield discloses that time-slice information (e.g., via next page pointer) is used to determine the actual amount of time that is to elapse (lines 31-32) wherein the actual time value is loaded into a timer. While Mansfield discloses that a preferable embodiment comprises calculation means located at the mobile end system for determining the actual amount of time that is to elapse, it is generally considered to be within the ordinary skill in the art to shift the location of parts absent a showing of unexpected results. Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to shift the location of the actual time calculation means from the mobile end system to the base station, since it is

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generally considered to be within the ordinary skill in the art to shift the location of parts absent a showing of unexpected results. The contention of obvious choice in design can be overcome if Applicant establishes unexpected results. In re Japikse, 86 USPQ 70 (CCPA 1950).

Further, regarding claim 7, the amount of time in a slot of Mansfield implicitly includes any transmitter-idle time between transmission bursts.

Regarding claims 3 and 34, the time-slice information (e.g., header 1015 comprising next page pointer 1010) of Mansfield specifies a duration for transmitting the current burst of packets, wherein the duration for transmitting the current burst of packets is determined using the number of time frames denoted by the time-slice information multiplied by the time frame length (e.g., see col. 10, lines 24-36).

Regarding claims 4 and 32, Mansfield teaches the header (1015) includes an index (e.g., CU field 1009 indicating slot utilization) for numbering originally transmitted bursts of packets (e.g., see col. 19, lines 48-50 and FIG. 10A).

Regarding claim 5, Mansfield teaches determining as far as eight possible paging intervals in advance (e.g., see col. 4, lines 22-25), and thus, anticipates a buffer substantially large enough to store at least two full bursts of data from the information service provider (e.g., PDS 102, 103) and any data to be transmitted between transmission of the two full bursts of data.

Regarding claim 6, Mansfield teaches the amount of time that elapses between transmitting the current packet and transmitting the first-transmitted packet of the subsequent burst is determined based at least in part upon how many packets will be transmitted between transmitting the current packet and transmitting the subsequent packet (e.g., see col. 3, line 66 – col. 4, line 25).



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Regarding claim 8, while Mansfield may not specify a buffer type, the Examiner takes official notice that elastic, FIFO, ring and dual buffers are all well known in the art as available buffer types.

Regarding claims 9, 21, 27, 35, 40, 45 and 49, Mansfield teaches time-slice information (e.g., 1010) is placed into lower layer protocol packet header bits (e.g., see FIG. 10A wherein time-slice information 1010 is placed into lower layer packet header 1015 bits).

Regarding claims 10, 22, 28, 36, 41, 46 and 50, while Mansfield may not specifically disclose the lower layer protocol is DVB DSM-CC, the Examiner takes official notice that such a protocol is well known in the art to provide digital video broadcast. Furthermore, Mansfield teaches the invention may be used in virtually any type of communication system requiring receiving terminals or other equipment to be paged (e.g., see col. 5, lines 16-21). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to utilize the DVB DSM-CC section protocol to provide the power conservation technique of Mansfield with a digital video broadcast communications system.

Regarding claims 11, 23, 29, 37, 42, 47 and 51, Mansfield teaches the time-slice information is placed into at least one byte reserved but not used for media access control addressing (e.g., see col. 9, line 46 – col. 10, line 51, and FIGS. 4, 9 and 10A).

Regarding claims 12, 13 and 15-18, while Mansfield may not specifically disclose indexes of decreasing or increasing order or first/last packet indications, the Examiner takes official notice that such indexes and first/last packet indications are well known in the art of transmitting packet bursts.

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Regarding claims 19, 26 and 33, Mansfield teaches a message number sub-field in ARQ 1011 which indicates whether the subsequent burst of packets is an original or a copy burst; wherein if the message number is the same as the previously received message the message is determined to be a copy, otherwise the message is determined to be an original (e.g., see col. 20, lines 8-39, specifically lines 23-26 and 32-33).

***Conclusion***


5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M Philpott whose telephone number is 703.305.7357. The examiner can normally be reached on M-F, 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on 703.308.6602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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